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9 October 1957 Lie P-1256

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MEMORANDUM FOR: THE RECORD

SUBJECT

: Silver Cell Batteries for Project, P-125D, 35 xxx

Time Lapse Cameras

- TIME AND PLACE OF MEETING: The meeting was held 2-3 October 1957 at Wright-Patterson Field, Dayton, Ohio.
  - ATTENDANCE:

Mr. J. E. Cooper Mr. G. Sherman

Battery Testing Laboratory Battery Testing Laboratory TBS/APD/OB

PURPOSE OF MEETING: To obtain factual information regarding a battery power source for P-125D, 35 mm Time Lapse Camera.

## DISCUBSION:

During the discussion, P-125D was referred to as an instrument requiring 25 volts, drawing 100 milliamperes constantly and 150 milliamperes intermittantly. That the battery must be small, light in weight, long ampere hours and reliable.

The following batteries were discussed:

DRY CELLS. Shelf life, poor. Easy to obtain, cheap in cost, but unreliable. It would be necessary to make test inspections frequently checking power supply. Dry cells can be used to power the instrument if necessary, but they are unreliable when the equipment is operating unattended.

LEAD ACID. Shelf life, excellent. Easy to obtain, cheap in cost, heavy in weight, large in size, and reliable. Lead acid batteries can be used to power the instrument when the situation of transportation, weight, and size is no problem.

NICKEL CADMIUM. Shelf life, good. Not easily obtainable, heavy in weight, large in size, very expensive, reliable. Mickel Cadmium batteries will operate the instrument unattended over long periods of time.

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SILVER CELLS. Shelf life, fairly good. Not easily obtainable, light in weight, small in size, very expensive, reliable. Long ampere hours. The battery laboratory at Wright Field, conducted tests on a wide range of batteries in order to determine the most efficient and reliable battery for use in President Eisenhower's helicopter. The Yardney Silver cell battery, 14 XHR-15 V, was selected. Technical memorandum is attached.

## 5. CONCLUSIONS:

In view of the fact that this camera can be used for many flexible and different operations, it is only as reliable as the power supply. One of the primary requirements for which the camera is adaptable is unattended surveillance.

## 6. RECOMMENDATIONS:

Supply each unit with one (1) 24 volt Silver Cell battery, capable of at least twenty ampere hours.

Supply each unit with one (1) 24 volt lead acid battery, capable of at least twenty ampere hours.

Do Not connect the two batteries in parallel in order to gain additional ampere hours.

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Attachment:

Mentioned Above

Distribution:

Orig. - P-125D

1 - AEH

1 - Chrono

AEH:ls (9 October 57)

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